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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,555	02/13/2001	Jacques Benveniste	9320.113USWO	8541
23552	7590	02/17/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			CHUNDURU, SURYAPRABHA	
			ART UNIT	PAPER NUMBER
			1637	
DATE MAILED: 02/17/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/673,555	<b>Applicant(s)</b> BENVENISTE ET AL.	
	<b>Examiner</b> Suryaprabha Chunduru	<b>Art Unit</b> 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-72 is/are pending in the application.
- 4a) Of the above claim(s) 24-27, 36-41 and 65-68 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23, 28-31, 33-35 and 42-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Applicants' response to the office action filed on September 4, 2003 has been entered and considered.
2. The Terminal Disclaimer filed on September 4, 2003 has been entered and considered.
3. The instant application is filed on February 13, 2001, which is a national stage entry of PCT/FR99/00915 filed on April 19, 1999.
4. Claims 1-23, 28-31, 33-35, 42-64, 69-72 are considered for examination in the previous office action. Non-elected claims 24-27, 36-41, 65-68 are withdrawn from consideration.

**Response to arguments**

5. Applicants' response to the office action is fully considered and found persuasive.
6. With reference to the rejection made in the previous office action under 35 USC 112, second paragraph applicants' arguments and amendment are fully considered and the rejection is withdrawn in view of the amendment.
7. With reference to the rejection made in the previous office action under obviousness-type double patenting, terminal disclaimer is considered and the rejection is withdrawn in view of the terminal disclaimer.
8. The following rejection was maintained in the previous office action under 35 USC 102(b):

Claims 1-23, 28-35 and 42-64, 69-72 are rejected under 35 U.S.C. 102(b) as being anticipated by Benveniste et al. (J Allergy Clin Immunol., vol. 99 (1), part 2, pp S175, 1997).

Benveniste et al. teach a method of digitally amplifying electromagnetic signal of biological molecules wherein Benveniste et al. disclose that the method comprises bringing into contact ligand (agonist) with receptor (target cell), applying electromagnetic signals in a solvent

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(water) to detect molecular activity (see page S175, column 1, abstract 705). Further, Benveniste et al. disclose recording digital 22kHz (kilo hertz) by a transducer and computer with soundcard (see page S175, column 1, abstract 705); the method can be applied to chemistry, biology and medicine. Thus the disclosure of Benveniste et al. meets the limitations in the instant claims.

***Response to arguments:***

With reference to the above rejection under 35 USC 102(b) as anticipated by Benveniste et al. (J.Allergy Clin Immunol., Vol. 99(1), part 2, ppS175, 1997), Applicants arguments and amendment are fully considered and found not persuasive. Applicants' amendment "reciting ligand *and/or* receptor signals" did not change the scope of the amended claim 1 since claims reads on either ligand alone or ligand and receptor. In case if ligand alone is considered, the prior art teaches excitation of signal from ovalbumin (ligand), if ligand and receptor are considered, the prior art teaches signals from perfused hearts from ovalbumin –immunized guinea pigs, indicating ovalbumin complexing with receptor in the perfused hearts and digitizing electromagnetic radiation signals under frequency of 22 kHz (see page S175, column 1, abstract 705). Applicants also argue that sampling frequency is not the excitation field applied directly to the biological substance. This argument is fully considered and found not persuasive because the prior art teaches "signals from ovalbumin are digitally amplified" and "EM radiation under 22 kHz can be digitized" which indicates that the biological element (ovalbumin) had been exposed to EM prior to recording the amplified signals is inherent in the teachings of prior art. Further, the limitation in the instant claims 21, 62, 64 recite " EM signal can be applied prior to, simultaneously with, or subsequent to" which does not limit the claim to application of EM signal prior to recording the signal. Applicants also argue that the instant amended claim 1

reciting "placing said biologically active element such as said ligand and /or receptor in a zone subjected to said excitation field..." is not anticipated by the prior art. This argument is fully considered, and found not persuasive. The amended claim 1, limitations are inherent in the teachings of Benveniste et al. as stated above. Thus the rejection is maintained herein.

### **New Grounds of Rejection Necessitated by Amendment**

#### ***Claim Rejections - 35 USC § 112***

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

(a) Claim 1-23, 28-31, 33-35, 42-64, 69-71 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The instant claims are confusing for referring to the subject matter in the term "and/or". It is unclear whether the claims encompass ligand alone or receptor alone or ligand and receptor. The claim should refer to the subject matter in the alternative only, the replacement of the term "and/or" with "and" or the addition of dependent claims are suggested.

(b) Regarding claim 1, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Claims 2-20, 23, 28-31, 33-35 are also rejected since they are dependent on the independent claim 1. See MPEP § 2173.05(d).

#### ***Conclusion***

No claims are allowable.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suryaprabha Chunduru whose telephone number is 571-272-0783. The examiner can normally be reached on 8.30A.M. - 4.30P.M, Mon - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and - for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

<sup>SPC</sup>  
Suryaprabha Chunduru  
January 30, 2004

  
**JEFFREY FREDMAN**  
**PRIMARY EXAMINER**